

**SYSTEM FOR FRAME BASED AUDIO SYNCHRONIZATION AND METHOD  
THEREOF**

**ABSTRACT OF THE DISCLOSURE**

A system and method is provided for synchronizing the presentation of audio data with video data. Audio transport packets are received through a demultiplexer from a multimedia transport stream. A transport stream synchronization manager is used to lock a system time clock, local to the demultiplexer, to a program clock reference provided through the multimedia transport stream. Presentation time stamps are provided with the audio transport packets to indicate when decoded audio data is to be output. A packetized elementary stream synchronization manager maintains synchronization by adding or dropping audio packets from the audio transport packets. If the packetized elementary stream manager is unable to acquire synchronization it must defer synchronization back to the transport stream synchronization manager. Otherwise, processed audio packets are passed to an elementary stream synchronization manager that attempts to synchronize the delivery of audio data through a sample rate conversion of the audio data. If the elementary synchronization manager is unable to acquire synchronization, it defers synchronization to the packetized elementary stream synchronization manager.